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Academic Math, Pd. 1

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Barbie’s Big Jump

**Equation: y=164.3+30.1(X-5)**

The Barbie falls over the steep edge of the stairwell with 12 rubber bands attached to her ankles. She falls for a split second, then her head hits the floor, doing our Barbie Bungee Jump. In class, we did a Barbie bungee where we tied a certain number of rubber bands to a Barbie’s feet, and dropped her off a chair or surface to see how far in cm. she will fall from the ground. We collected the data on the chart given, and recorded how far or long her jump was. The equation was found by choosing two points on the line, then finding the slope of the graph. (Mine is shown above) This equation was used to find the line of fit which is in my graph above. Some other equations and slopes may be used as well. Examples of some others from our group are:

* (1,43.66) and (6, 193.33) slope: 29.934 Equation: 193.33+29(x-6) or 43.66+29.934(x-1)

The stairwell jump was a very high drop of about 22 feet. We had to attach about 15 rubber bands to her feet because we wanted to see if she could reach the stairs at the bottom. The final jump distance on the stairwell was about 22 feet. This project was very good with having our groups work together as a team to do this project, and with exercising our ability to do equations, how to graph data, and to record data from something as simple as a Barbie jump for experiments later in the future. The problem was that her jump distance was a little hard to calculate because her drop ended at one point for a split second, so you had to do the drop with that number of rubber bands two or three times instead of only once. Sometimes the Barbie had to jump 4 or 5 times because some groups may have disagreed on how long her jump was. But for my group, we helped each other do the project, and it was a lot of fun doing it together as a group.